FILE NO.: KSKO-25,661 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Kameswari S. Konduri, et al
Serial No.: 10/769,034
Filed: 01/30/04
TC: 1633
Examiner: Kevin K. Hill

For: A Sterically Stabilized Carrier for Aerosol Therapeutics, Compositions and Methods For Treating Diseases of the Respiratory Tract of a Mammal

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail in an envelope addressed to MS Board of Patent Appeals and Interferences, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.
Name: J. Lindsey Scott
Date: 2-24-09

MS Board of Patent Appeals and Interferences
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO THE NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

In response to the Notification of Non-Compliant Appeal Brief mailed November 24, 2008, please consider the following amendments and comments.

With respect to the first objection, Applicant's claims have now been listed as shown in the PAIRS System. The correct identifiers have been shown, as well as all of the claims. Applicant's listing of the claims involved in the Appeal does not include the non-listed claims.

The Examiner's action in renumbering the claims from the original claim numbering in mid-stream during the prosecution has been previously addressed. Attempts have been made to draft the Brief on Appeal to be as concise as possible in identifying which set of numbers is used at each reference to the claims. The reference to the renumbering required by the Examiner following the originally submitted claim numbers has been deleted.

The Examiner's objections to Applicant's entry of a disclaimer with respect to the rejection for non-statutory obviousness by double patenting as been noted to supply completeness in the

response to the grounds cited in the Examiner's final office action, which required actions which were not made because of the Examiner's non-entry of Applicant's amendment after final. No argument is made as to whether this non-statutory obviousness by double patenting rejection should be maintained or otherwise. It is noted in the Brief on Appeal that this references application will expire in the very near future in any event.

The rejections with respect to the newness of rejection have been discussed in the Brief on Appeal and no further discussion is considered necessary.

It is noted that the finality of the final rejection will be maintained, which was Applicant's understanding in view of the requirement for multiple revisions of the Brief on Appeal. It is further noted that apparently the reviewing office for the Board of Appeals had no objection to the Brief as revised the second time in accordance with their requests.

It is believe that the foregoing amendments to the claims and the revisions to the Brief on Appeal place the Brief in condition for consideration by the Board of Appeals in view of the Examiner's objections.

Accordingly it is respectfully submitted that this Brief is in condition for consideration and it is respectfully requested that it be promptly forwarded to the Board of Appeals for consideration.

Respectfully submitted,

F. Lindsey Scott
Attorney for the Applicant
Registration No. 26,230

F. Lindsey Scott
1448 Scarborough Lane
Plano, Texas 75075
Phone: 972.599.2888

FILE NO.: KSKO-25,661 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Kameswari S. Konduri, et al
Serial No.: 10/769,034
Filed: 01/30/04
TC: 1633
Examiner: Kevin K. Hill

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail in an envelope addressed to MS Board of Patent Appeals and Interferences, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.
Name: J. Lindsey Scott
Date: 2-24-09

For: A Sterically Stabilized Carrier for Aerosol Therapeutics, Compositions and Methods For Treating Diseases of the Respiratory Tract of a Mammal

MS Board of Patent Appeals and Interferences
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

FURTHER AMENDED BRIEF ON APPEAL

Pursuant to a Notice of Appeal filed May 29, 2007, Applicants set forth herein the authorities and arguments upon which Applicants rely.

INDEX

REAL PARTY IN INTEREST

This Application is assigned to VGSK Technologies, Inc., the real party in interest, by an assignment recorded April 11, 2006 at Reel/Frame 017856/0582.

RELATED APPEALS AND INTERFERENCES

None.

STATUS OF CLAIMS

Applicants' claims 1-5, 8-13, 16-19, 22-29, 32-38, 41-45, 48-49, 52 and 53 were rejected by the Examiner in the Office Action mailed March 1, 2007.

The present status of the claims is:

Pending: 1-6, 8-19, 22-30, 33-39, 42-50 and 52- 53.

Objected to: 4, 13 and 45.

Withdrawn: 6, 14-15, 30-31, 46-47 and 51.

Cancelled: 7, 20-21, 39-40 and 50.

Rejected: 1-5, 8-13, 16-19, 22-29, 32-38, 41-45, 48-49 and 52.

The claim status above represents the status of the claims prior to the un-entered amendment after final filed July 19, 2007, as stated by the Examiner in the final rejection mailed March 1, 2007.

Claim 53 was considered by the Examiner to be pending but was not addressed by the Examiner in the Office Action summary mailed March 1, 2007. This claim has been assumed to be rejected.

The claims under appeal are 1-5, 8-13, 16-19, 22-29, 32-38, 41-45, 48-49 and 52. These claims presently stand finally rejected. A clean copy of the claims under appeal and the claims as filed in the last entered response are attached. The Examiner has renumbered the claims, as shown in the last entered response, by changing the numbers of claims 29-53 to claims 28-52, respectively.

The amendment mailed July 19, 2007, made amendments to the claims and to the specification but has been denied entry.

It is concluded by Applicants that the status of the claims under appeal is as shown above based upon the Examiner's February 6, 2008 Office Action. (The time for response was reset because this Office Action was not received by Applicants.)

STATUS OF AMENDMENTS

The subject application was filed initially as U.S. Serial No. 10/769,034 on January 30, 2004 by Kameswari S. Konduri, Sandhya Nandedkar, Nejat Duzgunes and Pattisapu Ram Jogi Gangadharma (deceased) by Ramarrishna Pattisapu, his legal representative. The application claimed the benefit of provisional application serial no. 60/498,609 filed August 28, 2003 and the benefit of provisional application serial no. 60/498,546 filed August 28, 2003. The application as originally filed contained 52 claims of which claims 1, 18 and 34 were independent.

In a first Office Action mailed May 2, 2006, Applicants' claims were held subject to a restriction requirement (copy attached). Applicants were unable to understand what restriction was desired by the Examiner and a telephonic interview was held May 19, 2006 with Examiner Kevin K. Hill, Dr. Kameswari S. Konduri and attorney for the Applicants, F. Lindsey Scott to clarify the restriction requirement. It was ultimately agreed by the parties that Applicants would limit their application to a single drug, i.e., budesonide, for examination.

An Office Action dated August 10, 2006 was issued wherein Applicants' claims 1-52 (prior to the Examiner's renumbering) were considered and wherein Applicants' claims 6, 28 and 52 were withdrawn and claims 1-5, 7-27 and 29-51 were rejected, with claim 30 being objected to.

The rejections were based upon the restriction requirement, with the Examiner stating that the drugs are each independent and mutually exclusive of the others, objections were made under 35 U.S.C. 112 with respect to an alleged failure to point out and specifically claim the subject matter considered by Applicants to be the invention (assertion of "does not reasonably provide enablement for all possible formulations"), rejection under 35 U.S.C. 102 of claims 1-4, 7-14, 16-27, 29-31 and 33-34 (original claim

numbers) over Onyuksel, et al, (herein Onyuksel), U.S. Patent 6,197,333B1 issued March 6, 2001. Claims 1, 5, 14-15, 18, 31-32 and 35-51 (original claims numbers) were rejected under 35 U.S.C. 103(a) over Waldrep, et al (herein Waldrep), U.S. Patent 5,958,378 as applied to the limitation of a liposome carrier and the drug budesonide further in view of Onyuksel and a medical journal abstract by Konduri, et al (herein Konduri), J. Allergy Clin. Immunology Supp. 107(2): S315, 2001 and Waldrep (Abstract Only) Drugs Today, 34(6):549561, 1998.

Applicants responded to this Office Action with an amendment mailed December 5, 2006 wherein Applicants limited the claims to claims 1-5, 8-13, 16-19, 22-27, 29-30, 33-39, 42-46, 49 and 50 (original claim numbers). Various amendments were made to the claims to overcome various formal rejections. Various objections raised by the Examiner with respect to the breadth of support were addressed. Also the formal correspondence of the claims to the specification were addressed.

A Notice of a Non-Compliant Amendment was mailed November 28, 2006 and Applicants thereafter responded to this Notice December 5, 2006 with an attempt to bring the amendment into compliance.

A final rejection was made in an Office Action mailed March 1, 2007, wherein Applicants' claims 1-6, 8-19, 22-30, 33-39, 42-50, 52 and 53 (Examiner's renumbering) were considered and partially renumbered by the Examiner. Applicants claims 1-5, 8-13, 16-19, 22-29, 32-38, 41-45, 48-49 and 52 were rejected with claims 4, 13, and 45 being objected to.

The Examiner raised numerous formal objections, varying from disagreement with Applicants' spelling of certain of the compounds (not raised prior to final rejection), renumbering of the claims due to a missing claim 28, and a requirement for the filing of a Terminal Disclaimer with respect to U.S. Serial No. 11/442,907, which will become abandoned for lack of prosecution March 18, 2009. Claim rejections were also made under 35 U.S.C. 112, first paragraph, based upon an allegation that Applicants had not provided enablement for "all possible formulations." Various other arguments were made by the

Examiner with respect to the state of the art, level of ordinary skill in the art, etc., all directed to the premise that Applicants have not disclosed sufficient detail to enable those skilled in the art to duplicate Applicants' claimed invention. Among other arguments made by the Examiner in this Office Action was the argument that "The drug carried by the liposome is immaterial to the enablement rejection." This statement was made after the restriction requirement to a single drug was required by the Examiner. Various other arguments were raised with respect to support in the application for various claims and additional rejections under 35 U.S.C. 112 were made.

Rejections were made under 35 U.S.C. 102 over Onyuksel.

Rejections were made under 35 U.S.C. 103 over Onyuksel, Waldrep and Konduri, et al.

A response to this Office Action was mailed to the Patent Office July 19, 2007 with a request for a two-month extension of time to file. This response was not entered.

An Office Action was mailed February 6, 2008 by Examiner Kevin K. Hill, Ph.D. noting errors in the listing of claims in the Brief and the inclusion of non-entered matter in the claims as well as errors in the presentation of arguments. This Office Action was not received by Applicants' attorney and came to his attention only after checking the status of the Appeal. Upon learning of an Office Acton outstanding, Applicants' attorney called Examiner Hill August 12, 2008 and Examiner Hill reset the time for response to begin August 12, 2008. A response to this Office Action was mailed October 6, 2008.

An undated Advisory Action Before the Filing of an Appeal Brief was mailed to Applicants advising that the Amendment After Final would not be entered.

A Notification of Non-Compliant Appeal Brief was mailed to Applicants by Examiner Hill stating that the Brief contains non-entered claims. A Notice of Non-Compliant Appeal Brief was mailed to Applicants by Darlene Brown stating numerous objections to Applicants' Brief.

A response to these two communications was received by the Patent Office September 10, 2007.

A Notice of Non-Compliant Appeal was mailed October 25, 2007 to Applicants listing various defects in Applicants' Appeal Brief.

A Response to the Notification of Non-Compliant Appeal Brief from Darlene Brown was mailed October 25, 2007 and was received and filed by the Patent Office December 3, 2007.

A further Notice of Non-Compliant Appeal Brief by Examiner Hill was mailed to Applicants November 24, 2008.

SUMMARY OF CLAIMED SUBJECT MATTER

The claimed invention is a carrier comprising phosphatidylglycerol, phosphatidylcholine, and poly(ethylene glycol) adapted to encapsulate budesonide for aerosol administration to the lungs of a mammal. The formulation comprising the carrier and the budesonide provide extended effective life for the budesonide in the lungs of a mammal.

The invention is claimed as a carrier formulation in claim 1 and is supported by the specification page 3, line 20 through page 4, line 2; page 7, line 15 through page 8, line 15; page 10, line 5 and the examples.

A composition comprising the carrier in combination with budesonide is claimed in claim 18 and is supported by the specification page 4, lines 2-7; page 7, line 15 through page 8, line 15; page 10, line 5 and the examples.

A method for treating the lungs of a mammal using the combined budesonide and carrier is claimed in claim 35 and is supported by the specification at page 3, lines 8-13; page 7, line 15 through page 8, line 15; page 10, line 5 and the examples.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Is Applicants' spelling and hyphenation of chemical compounds correct? This issue, first raised in the final rejection, has been addressed in the amendment filed July 19, 2007, which was refused entry. Applicants are willing to make the required changes as submitted in the unentered amendment after final.

Is a double patenting rejection proper based upon U.S. Patent Application 11/442,907? If the amendment after final, including the required terminal disclaimer, was entered does this issue become moot?

Claims 34-38, 41-45 and 48-49 (Examiner's renumbering) have been rejected under 35 U.S.C. 112 on the basis that they do not provide enablement for "all possible formulations" and do not meet the disclosure and enablement requirements of 35 U.S.C. 112. Applicants consider these claims to provide adequate enablement.

Claims 3-5, 9-11, 22, 27, 35, 37-38, 42-43 and 52 (Examiner's renumbering), have been rejected under 35 U.S.C. 112 for failure to meet the requirements of 35 U.S.C. 112. Applicants' consider these claims to fully meet the requirements of 35 U.S.C. 112.

Claims 3-5, 23-26, 35 and 52, have been separately rejected under 35 U.S.C. 112 as failing to meet the requirements of 35 U.S.C. 112. Applicants consider these claims to fully meet the requirements of 35 U.S.C. 112.

Applicants' claims have been held unpatentable under 35 U.S.C. 102 in view of Onyuksel. Applicants do not agree.

Applicants' claims have been held unpatentable under 35 U.S.C. 103 over Onyuksel, Waldrep and Konduri. Applicants do not agree.

GROUPING OF CLAIMS

Claims 1-3, 8-13 and 16-17 (original numbering) stand or fall as a group.

Claims 18-19, 22, 26 and 28-31 (Examiner's required numbering) stand or fall as a group.

Claims 34-38, 41-45, 48 and 49 (Examiner's required numbering) stand or fall as a group.

ARGUMENT

Spelling and Hyphenation of Chemical Compounds

It is considered that Applicants' amendments to the specification and claims with respect to spelling and hyphenation of chemical compounds, as corrected in the July 19, 2007 amendment would have obviated all rejections based upon these matters should that amendment have been entered. It is further submitted that the terms, as presently included in Applicants' specification, would define the intended materials to those skilled in the art. The Examiner apparently had no problem determining which materials were intended. These rejections were first made only in the final rejection made March 1, 2007. Applicants are willing to make the amendments proposed in the non-entered Amendment after Final.

Double Patenting Rejection

It appears that the double patenting rejection, which Applicants consider to be improper, would have been fully obviated by Applicants' required submission of a Terminal Disclaimer with the response after final dated July 19, 2007. This rejection was first made only in the final rejection made March 1, 2007. Applicants are willing to make this disclaimer. This application will become abandoned for lack of prosecution March 18, 2009.

The Examiner's requirement for renumbering of the claims has resulted in considerable superficial confusion. The rejections are stated accordingly in the Examiner's new numbers. Applicants' listing of pending claims and Applicants' claim groups have been renumbered as required by the Examiner. Applicants consider this renumbering to have been confusing, especially if reference is made to earlier prosecution and in direct violation of 35 C.F.R. 1.126.

Rejections Under 35 U.S.C. 112

The rejection of Applicants' claims under 35 U.S.C. 112 is primarily based upon the Examiner's position that the disclosure in Applicants' disclosure does not provide enablement for "all possible

formulations" It is respectfully submitted, particularly in view of the Examiner's comments in other places in the Office Action, that the drug used with the carrier is considered to be "immaterial." It is Applicants' position that having disclosed a sterically stabilized liposome formulation which is compatible with the lungs of a mammal and which encapsulates a drug, budesonide, is sufficient to enable those skilled in the art to produce suitable carrier materials. Applicants are unaware of any third party having used, disclosed or suggested sterically stabilized liposomes as a carrier for aerosol delivery of a combination of the sterically stabilized liposome and budesonide to the lungs of a mammal prior to Applicants' use as disclosed in the subject application. The surfactants found in the lung of a mammal are known and may vary from one mammal to another. Applicants have disclosed and claimed the use of budesonide as a drug in the examples to show the extended results achieved by encapsulating drugs in Applicants' carriers. It is not considered to be the law that "all possible formulations" must be shown specifically. It is respectfully submitted that suitable formulations can be produced by those skilled in the art based upon their knowledge of the conditions in the lungs of a mammal based upon Applicants' disclosure and examples. Applicants' examples detail preparation of the drugs, procedures and results achieved in the examples.

The Examiner has speculated at length as to whether experimentation or testing is necessary. Some experimentation is permissible to define the effectiveness of a compound. In other words, if a compound is produced which is not compatible with the lungs of a particular mammal to which it is administered, it is possible that the desirable results may not be achieved. There is certainly nothing, however, which prevents those skilled in the art from reviewing the properties of their produced carrier by comparison to the lung surfactants in the mammal of interest to produce an effective carrier. It is noteworthy that the Examiner has stated on page 11 of his relatively lengthy office action that, "The drug carried by the liposome is immaterial to the enablement rejection." This is a strange position for an Examiner to take after requiring restriction to a single drug, budesonide. This previously required

restriction to budesonide could result in Applicants having to file as many as 30 to 50 applications directed to specific separate drugs to fully protect their invention. It is not considered that this is the law.

The Examiner further opines that one of ordinary skill in the art cannot reasonably extrapolate Applicants' disclosure of a single liposome formulation to an entire genus of liposome formulations and expect that all possible formulations and species embraced by the genus will perform according to the inventive method. It is well known that there are many liposome and sterically stabilized liposome formulations. Liposomes have been used for many intravenous treatments. These sterically stabilized liposomes for intravenous treatments can very well have properties which would not be suitable for use in the lungs of a mammal. It is considered that those skilled in the art can determine the conditions for compatibility with the lungs of a selected mammal and can formulate their sterically stabilized liposome formulations accordingly.

Certainly Applicants' disclosure is more than sufficient to show that Applicants' were in possession of the invention at Applicants' filing date.

The Examiner's newly asserted discussion on pages 14 and 15 directed to the proper spelling of the materials would have been obviated by the foregoing amendment filed July 19, 2007. Applicants remain willing to make these changes.

Rejections Under 35 U.S.C. 102

The rejection of Applicants' claims 1, 5, 8-13 and 16-17 under 35 U.S.C. 102(b) as anticipated by Onyuksel is respectfully traversed and reconsideration is respectfully requested. Applicants' claims are drawn to a composition comprising a sterically stabilized liposome carrier for encapsulating budesonide. It is noted that the carrier encapsulates the budesonide, unlike Onyuksel. Onyuksel discloses various formulation techniques for the production of his materials, which are claimed as sterically stabilized liposomes which are formed and thereafter contacted with, blended with, or combined with an amphipathic compound. These materials include many combinations of liposomes with a variety of

water-soluble polymers for purposes of producing sterically stabilized liposomes, many of which are considered unsuitable by Applicants. Onyuksel speculates that his liposomes may be effective for treating a variety of diseases, such as asthma, and that the disclosed compositions may be delivered by aerosol administration, nebulization, etc. It is respectfully pointed out that Onyuksel does not show any way (enablement) for treating asthma with any drugs or carriers or any combinations thereof disclosed in his patent disclosure or that any such treatments would be effective. Further no technique or formulation is shown for administration, nebulization, etc. Accordingly, these are simply speculations and attempts to broadly cover a much wider area than encompassed in Onyuksel's disclosure.

Onyuksel basically claims the use of sterically stabilized liposomes to produce sterically stabilized liposomes to support an amphipathic compound which is much beyond the scope or enablement of his disclosure. The disclosure is limited to peptides of various types. Onyuksel discloses at column 16 a first method which is not the same as Applicants' preferred method, which requires drug encapsulation and includes some additional steps. This is disclosed as a method for mixing the VIP with a lipid composition followed by extrusion, repeated freezing and thawing, etc. The difference between this technique and the other techniques which are considered to be within the scope of Onyuksel's invention is that in this instance the VIP was initially mixed with the lipids for the production of an encapsulated amphipathic material encapsulated in the sterically stabilized lipids.

It is indicated at column 17, lines 42-43 that the lipids, the VIP and liposomes prepared by the first method, which is "not contemplated by the invention" (column 16, lines 18-20) did not elicit an increase in arterial diameter significantly different than previously reported (column 17, lines 41-46). It is also noted in this same paragraph that when liposomes are produced without an extrusion step they show an enhanced prolonged effect and that further the result is significant in demonstrating that SSL (sterically stabilized liposomes) in general are not amenable to the Onyuksel disclosure. This is directly contrary to Applicants' results with the claimed carrier and encapsulation of the budesonide in the carrier.

Further it is noted that Onyuksel obtained very slight increases in effective life with the longest persistence of effect noted being at column 18, lines 9-13 wherein a significant decrease in mean arterial pressure, up to 50%, was observed in the first 2.5 hours which persisted for the six- hour observation. Onyuksel has not achieved anything approaching the extended effective life for a drug achieved by Applicants.

Onyuksel's formulations do not encapsulate the drug but rather blend the drug with the formed sterically stabilized liposomes for use in a treatment. It is Applicants' position that this does not encapsulate the drug in the carrier and would not be expected to provide extended effectiveness for the drug, as shown in Applicants' examples (Example 1, page 12, lines 21-22; Figures).

Further Onyuksel is extremely vague in the types of material used and it is not possible to determine from the specification whether these materials might be suitable for use in the lungs of a mammal. Onyuksel also does not disclose the use of the drug required by restriction in the subject application for use with a sterically stabilized liposome carrier.

Onyuksel discloses a combination of lipids with at least one lipid being covalently bonded to a water soluble polymer. This material is then extruded to produce particles. These particles are then incubated with the amphipathic drug of Onyuksel under conditions to associate the drug with the particles. Applicants' use no such step and do not consider this method to be effective to produce Applicants' compositions. Applicants do not use the drugs disclosed in Onyuksel and treat different maladies than Onyuksel. As previously noted, Onyuksel teaches away from Applicants' invention.

Further the Examiner's position has been that the preparation of sterically stabilized liposomes was well known long before the Onyuksel disclosure. Such is the case. However, a wide variety of sterically stabilized liposomes can be prepared, some of which are more suitable for use intravenously and some which are suitable for other purposes. There is no suggestion in Onyuksel that sterically stabilized

liposomes compatible with the lungs of a mammal should be produced or used. Accordingly, it is submitted that Onyuksel does not show Applicants' claimed invention.

Rejections Under 35 U.S.C. 103

Applicants' claims 1, 2, 5, 8-18, 16-17 and 52 have been rejected under 35 U.S.C. 103 based upon Konduri and Waldrep. Konduri discloses in the Abstract that sterically stabilized liposomes with budesonide are effective to obtain an extended effective life of a drug. There is no suggestion as to the particular type of sterically stabilized liposomes which should be used or how they should be prepared. The Konduri reference has been combined with Waldrep, which is apparently cited to support the premise that large amounts of drugs can be used with liposome treatments. The liposomes used in Waldrep do not appear to be sterically stabilized liposomes. In Applicants' examples, it is shown that non-sterically stabilized liposomes combined with budesonide were not effective. Thus, the argued combination of these two references results in a disclosure of a technique and compound which has been demonstrated to be non-effective. Nothing in Waldrep suggests that sterically stabilized liposomes should be used. Konduri does not suggest that suitable sterically stabilized liposomes should be used in Waldrep in lieu of the non-sterically stabilized liposomes disclosed cited in Waldrep. Accordingly, there is no reason to combine these references. Even if combined, these references do nothing to show or suggest Applicant's claimed invention.

Claims 1 and 2, 5, 8-13, 16-17 and 52 have been rejected under 35 U.S.C. 103(a) in the final rejection in a rejection noted by the Examiner as "newly rejected." This seems counterintuitive to the requirement that the prosecution be completed before a final rejection is made. In other words, Applicants have had no opportunity to respond to this rejection prior to receiving notice that it had been "newly" made in a final rejection mailed March 1, 2007.

In any event, Onyuksel is not considered to show or suggest Applicants' claimed invention as discussed above and actually is considered to teach away from Applicants' claimed invention. Waldrep

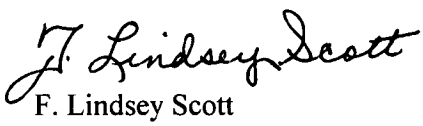
does nothing to add to the disclosure in Onyuksel since a different type of liposomes are used and Konduri is not considered to show or suggest any specific sterically stabilized liposomes which would be effective to achieve the desired objective.

Claims 18-19, 22-27, 28-29, 32-38, 41-45 and 48-49 have also been "newly" rejected under 35 U.S.C. 103(a) in the final rejection. These claims are directed to substantially the same issues and are not considered to be shown or suggested by any of the references cited above.

In view of the foregoing amendments and comments, it is respectfully submitted that none of Applicant's claims fail to comply with 35 U.S.C. 112, that the enablement requirements under 35 U.S.C. 112 are met, that none of Applicants' claims have been shown by Onyuksel and that none of Applicants' claims have been shown or suggested under 35 U.S.C. 103 by the cited references.

Accordingly, it is respectfully requested that the Examiner be reversed and that Applicants' claims be passed to issue.

Respectfully submitted,



F. Lindsey Scott
Attorney for the Applicants
Registration No. 26,230

F. Lindsey Scott
1448 Scarborough Lane
Plano, Texas 75075
Phone: 972.599.2888

CLAIM APPENDIX

1. Listing of Claims Involved in Appeal:

1. A sterically stabilized liposome carrier wherein the carrier contains phosphatidylcholine, phosphatidylglycerol and poly (ethylene glycol) for combination with budesonide for aerosol administration, the carrier being compatible with a respiratory tract of a mammal and effective to extend the effective life of the budesonide in the respiratory tract by a time equal to at least twice the effective life of the budesonide alone.

2. The carrier of claim 1 wherein the time is equal to at least three times the effective life of the budesonide alone.

3. The carrier of claim 1 wherein the carrier contains phosphatidylglycerol in an amount up to 99% of the total phosphatidylcholine and phosphatidylglycerol in the carrier.

4. The carrier of claim 3 wherein the carrier further contains phosphatidylglycerol in an amount up to 99% of the total phosphatidylcholine and phosphatidylglycerol in the carrier.

5. The carrier of claim 1 wherein the carrier further contains phosphatidylcholine in an amount up to about 50% of the total phosphatidylcholine and phosphatidylglycerol in the carrier.

8. The carrier of claim 1 wherein the poly (ethylene glycol) has a molecular weight from about 500 to about 5,000 daltons.

9. The carrier of claim 1 wherein poly(ethylene glycol) is attached to lipids such as cholesterol or phosphatidylethanolamine having acyl chains containing from about 8 to about 18 carbon atoms.

10. The carrier of claim 9 wherein the acyl chains contain from about 16 to about 18 carbon atoms.

11. The carrier of claim 9 wherein the acyl groups comprise at least one of distearoyl, stearoyl oleoyl, oleoyl stearoyl, stearoyl palmitoyl, dipalmitoyl, dioleoyl, palmitoyl oleoyl and dipalmitoleoyl.

12. The carrier of claim 1 wherein the carrier comprises at least one of poly (ethylene glycol)-conjugated lipids, phosphatidylinositol, dipalmitoylphosphatidylpolyglycerol, lipid conjugated polyoxyethylene, lipid conjugated polysorbate, or lipids conjugated to other hydrophilic steric coating molecules safe for in vivo use, the sterically stabilized liposome being effective to extend the effective lifetime of the budesonide in the respiratory tract of a mammal.

13. The carrier of claim 1 wherein the carrier contains phosphatidylcholine, phosphatidylglycerol, poly (ethylene glycol)-distearyolphosphatidyldiethanolamine, with or without cholesterol.

16. The carrier of claim 1 wherein the carrier comprises egg-derived or soybean-derived phosphatidylcholine.

17. The carrier of claim 1 wherein the carrier comprises egg-derived or soybean derived phosphatidylglycerol.

18. A composition comprising a sterically stabilized liposome carrier wherein the carrier contains phosphatidylcholine, phosphatidylglycerol and poly (ethylene glycol) in combination with budesonide, the composition being compatible with a respiratory tract of a mammal, aerosol administration and effective to extend the effective life of the budesonide in the respiratory tract by a time equal to at least twice the effective life of the budesonide alone.

19. The composition of claim 18 wherein the time is equal to at least three times the effective life of the budesonide alone.

22. The composition of claim 18 wherein the phosphatidylcholine is present in an amount equal to from about 50 to about 100 weight percent.

23. The composition of claim 21 wherein the carrier comprises up to about 50 weight percent phosphatidylglycerol.

24. The composition of claim 20 wherein the carrier further comprises poly (ethylene glycol).

25. The composition of claim 24 wherein the poly (ethylene glycol) has a molecular weight from about 500 to about 5,000 Daltons.

26. The composition of claim 18 wherein at least one of phosphatidylcholine, phosphatidylglycerol or poly(ethylene glycol)-derivatized lipid have acyl chains containing from about 8 to about 18 carbon atoms.

27. The composition of claim 26 wherein the acyl groups comprise at least one of distearoyl, stearoyl oleoyl, oleoyl stearoyl, stearoyl palmitoyl, dipalmitoyl, dioleoyl, palmitoyl oleoyl and dipalmitoleoyl.

28. The composition of claim 18 wherein the carrier comprises at least one of poly(ethylene glycol[-conjugated lipids, phosphatidylinositol, dipalmitoylphosphatidylpolyglycerol, lipid conjugated polyoxyethylene, lipid conjugated polysorbate, or lipids conjugated other hydrophilic steric coating molecules safe for in vivo use, the sterically stabilized liposome being effective to extend the effective lifetime of budesonide in the respiratory tract of a mammal.

29. The composition of claim 18 wherein the carrier contains phosphatidylcholine, phosphatidylglycerol, and poly (ethylene glycol- distearyolphosphatidyldiethanolamine.

32. The composition of claim 18 wherein the carrier comprises egg-derived or soybean-derived phosphatidylcholine.

33. The composition of claim 18 wherein the carrier comprises egg-derived or soybean-derived phosphatidylglycerol.

34. A method for treating the respiratory tract of a mammal by aerosol administration of an effective amount of a composition comprising a sterically stabilized liposome carrier wherein the carrier contains phosphatidylcholine, phosphatidylglycerol and poly(ethylene glycol) for combination with budesonide, and budesonide, the sterically stabilized liposome being compatible with the respiratory tract of a mammal and effective to extend the effective life of the budesonide in the respiratory tract by a time equal to at least twice the effective life of the budesonide alone.

35. The method of claim 35 wherein the carrier comprises phosphatidylcholine and wherein at least 50 percent of the head groups contain phosphatidylcholine.

36, The method of claim 35 wherein the carrier further comprises phosphatidylglycerol.

37. The method of claim 36 wherein the phosphatidylcholine is present in an amount equal to from about 50 to about 100 weight percent.

38. The carrier of claim 37 wherein the carrier comprises up to about 50 weight percent phosphatidylglycerol.

41. The method of claim 35 wherein the poly (ethylene glycol) is attached to a lipid such as phosphatidylethanolamine and has acyl chains containing from about 8 to about 18 carbon atoms.

42. The method of claim 42 wherein the acyl chains contain from about 16 to about 18 carbon atoms.

43. The method of claim 42 wherein the acyl groups comprise at least one of distearoyl, stearoyl oleoyl, oleoyl stearoyl, stearoyl palmitoyl, dipalmitoyl, dioleoyl, palmitoyl oleoyl and dipalmitoleoyl.

44. The method of claim 35 wherein the carrier comprises at least one of poly (ethylene glycol)-conjugated lipids, phosphatidylinositol, dipalmitoylphosphatidylpolyglycerol, lipid conjugated polyoxyethylene, lipid conjugated polysorbate, or lipids conjugated other hydrophilic steric coating molecules safe for in vivo use, the sterically stabilized liposome being effective to extend the effective lifetime of a drug in the respiratory tract of a mammal.

45. The method of claim 35 wherein the carrier contains phosphatidylcholine, phosphatidylglycerol, and poly (ethylene glycol)-distearyolphosphatidyldiethanolamine, with or without cholesterol.

48. The method of claim 35 wherein the carrier contains egg-derived or soybean derived phosphatidylglycerol.

49. The method of claim 35 wherein the carrier contains egg-derived or soybean derived phosphatidylglycerol.

52. The carrier of claim 1 wherein the carrier contains distearoylphosphatidylethanolamine-cholesterol.

CLAIMS APPENDIX

2. Listing of Claims as Filed in Last Entered Response

1. (currently amended) A sterically stabilized liposome carrier wherein the carrier contains phosphatidylcholine, phosphatidylglycerol and poly (ethylene glycol) for combination with, [a drug] budesonide for aerosol administration, the [sterically stabilized liposome] carrier being compatible with a respiratory tract of a mammal and effective to extend the effective life of the [drug] budesonide in the respiratory tract by a time equal to at least twice the effective life of the budesonide alone.

2. (currently amended) The carrier of claim 1 wherein the time is equal to at least three times the effective life of the [drug] budesonide alone.

3. (currently amended) The carrier of claim 1 wherein the carrier [comprises] contains phosphatidylglycerol in an amount up to 99% of the total phosphatidylcholine and phosphatidylglycerol in the carrier.

4. (currently amended) The carrier of claim 3 wherein the carrier further [comprises] contains phosphatidylglycerol in an amount up to 99% of the total phosphatidylcholine and phosphatidylglycerol in the carrier.

5. (currently amended) The carrier of claim 1 wherein the [drug] carrier [comprises budesonide] contains phosphatidylcholine in an amount up to about 50% of the total phosphatidylcholine and phosphatidylglycerol in the carrier.

6. (withdrawn) The carrier of claim 1 wherein the drug comprises triamcinolone.

7. (cancelled)

8. (currently amended) The carrier of claim [8] 1 wherein the poly (ethylene glycol) has a molecular weight from about 500 to about 5,000 daltons.

9. (currently amended) The carrier of claim 1 wherein [at least one of phosphatidylcholine, phosphatidylglycerol and] poly(ethylene glycol) is attached to [a lipid] lipids such as cholesterol or phosphatidylethanolamine [, have] having acyl chains containing from about [16] 8 to about 18 carbon atoms.

10. (currently amended) The carrier of claim 9 wherein the acyl chains contain from about [8] 16 to about 18 carbon atoms.

11. (currently amended) The carrier of claim 9 wherein the acyl groups comprise at least one of distearoyl, stearoyl oleoyl, oleoyl stearoyl, stearoyl palmitoyl, dipalmitoyl, dioleoyl, palmitoyl oleoyl and dipalmitoleoyl.

12. (currently amended) The carrier of claim 1 wherein the carrier comprises at least one of poly (ethylene glycol)- conjugated lipids, phosphatidylinositol, dipalmitoylphosphatidylpolyglycerol, lipid conjugated polyoxyethylene, lipid conjugated polysorbate, or lipids conjugated to other hydrophilic steric coating molecules safe for in vivo use, the sterically stabilized liposome being effective to extend the effective lifetime of [a drug] the budesonide in the respiratory tract of a mammal.

13. (currently amended) The carrier of claim 1 wherein the carrier [is] contains phosphatidylcholine, and phosphatidylglycerol, poly (ethylene glycol)- [distearyolphosphatidyldiethanolamine] distearoylphosphatidyldiethanolamine, with or without cholesterol.

14. (withdrawn) The carrier of claim 1 wherein the drug is a drug useful for treatment of the respiratory tract of the mammal and is compatible with the sterically stabilized liposome.

15. (withdrawn) The carrier of claim 14 wherein the drug is selected from the group consisting of budesonide, flunisolide, triamcinolone, beclomethasone, fluticasone, mometasone,

dexamethasone, hydrocortisone, methylprednisolone, prednisone, cotisone, betamethasone, terbutaline, albuterol, ipratropium, pirbuterol, epinephrine, salmeterol, levalbuterol, formoterol, montelukast, zafirlukast, zileuton, loratadine, cetirizine isoniazid, ethambutol, pyrazinamide, rifamycin; rifampin, streptomycin, clarithromycin, azelastine, theophylline, amikacin, gentamicin, tobramicin, rifabutin, rifapentine, sparfloxacin, ciprofloxacin, quinolones, azithromycin, erythromycin, and isoniazid.

16. (original) The carrier of claim 1 wherein the carrier comprises egg-derived or soybean-derived phosphatidylcholine.

17. (original) The carrier of claim 1 wherein the carrier comprises egg-derived or soybean derived phosphatidylglycerol.

18. (currently amended) A composition comprising a sterically stabilized liposome carrier wherein the carrier contains phosphatidylcholine, phosphatidylglycerol and poly ethylene glycol) in combination with [a drug] budesonide, the composition being compatible with a respiratory tract of a mammal, aerosol administration and effective to extend the effective life of [a drug] the budesonide in the respiratory tract by a time equal to at least twice the effective life of the budesonide alone.

19. (currently amended) The composition of claim 18 wherein the time is equal to at least three times the effective life of the [drug] budesonide alone.

20. (cancelled)

21. (cancelled)

22. (currently amended) The composition of claim [20]18 wherein the phosphatidylcholine is present in an amount equal to from about 50 to about 100 weight percent.

23. (currently amended) The composition of claim 21 wherein the carrier comprises [from about 0] up to about 50 weight percent phosphatidylglycerol.

24. (original) The composition of claim 20 wherein the carrier further comprises poly (ethylene glycol).

25. (currently amended) The composition of claim [25] 24 wherein the poly (ethylene glycol) has a molecular weight from about 500 to about 5,000 Daltons.

26. (currently amended) The composition of claim 18 wherein at least one of phosphatidylcholine, phosphatidylglycerol or poly(ethylene glycol)-derivatized lipid have acyl chains containing from about [10] 8 to about [40] 18 carbon atoms.

27. (currently amended) The composition of claim 26 wherein the acyl groups comprise at least one of distearoyl, stearoyl oleoyl, oleoyl stearoyl, stearoyl palmitoyl, dipalmitoyl, dioleoyl, palmitoyl oleoyl and dipalmitoleoyl.

28. (withdrawn) (inadvertently omitted from original patent application.)

29. (currently amended) The composition of claim 18 wherein the carrier comprises at least one of poly(ethylene glycol)-conjugated lipids, phosphatidylinositol, dipalmitoylphosphatidylpolyglycerol, lipid conjugated polyoxyethylene, lipid conjugated polysorbate, or lipids conjugated other hydrophilic steric coating molecules safe for in vivo use, the sterically stabilized liposome being effective to extend the effective lifetime of [a drug] budesonide in the respiratory tract of a mammal.

30. (currently amended) The composition of claim 18 wherein the carrier [is] contains phosphatidylcholine, phosphatidylglycerol, and poly (ethylene glycol)-[distearyolphosphatidyldiethanolamine] distearoylphosphatidyldiethanolamine.

31. (withdrawn) The composition of claim 18 wherein the drug is a drug useful for treatment of the respiratory tract of the mammal that is compatible with the sterically stabilized liposome.

32. (withdrawn) The method of claim 31 wherein the drug is selected from the group consisting of budesonide, flunisolide, triamcinolone, beclomethasone, fluticasone, mometasone, dexamethasone, hydrocortisone, methylprednisolone, prednisone, cotisone, betamethasone, terbutaline, albuterol, ipratropium, pirbuterol, epinephrine, salmeterol, levalbuterol, formoterol, montelukast, zafirlukast, zileuton, loratadine, cetirizine isoniazid, ethambutol, pyrazinamide, rifamycin; rifampin, streptomycin, clarithromycin, azelastine, theophylline, amikacin, gentamicin, tobramicin, rifabutin, rifapentine, sparfloxacin, ciprofloxacin, quinolones, azithromycin, erythromycin, and isoniazid.

33. (original) The composition of claim 18 wherein the carrier comprises egg-derived or soybean-derived phosphatidylcholine.

34. (original) The composition of claim 18 wherein the carrier comprises egg-derived or soybean-derived phosphatidylglycerol.

35. (currently amended) A method for treating [a] the respiratory tract of a mammal by aerosol administration of an effective amount of a composition comprising a sterically stabilized liposome carrier wherein the carrier contains phosphatidylcholine, phosphatidylglycerol and poly(ethylene glycol) for combination with [a drug] budesonide, the sterically stabilized liposome being compatible with the respiratory tract of a mammal and effective to extend the effective life of the budesonide in [a] the respiratory tract by a time equal to at least twice the effective life of the [drug] budesonide alone.

36. (currently amended) The method of claim 35 wherein the carrier comprises phosphatidylcholine and wherein at least 50 percent of the head groups contain phosphatidylcholine.

37. (currently amended) The method of claim [36] 35 wherein the carrier further comprises phosphatidylglycerol.

38. (original) The method of claim 36 wherein the phosphatidylcholine is present in an amount equal to from about 50 to about 100 weight percent.

39. (currently amended) The carrier of claim 37 wherein the carrier comprises [from about 0] up to about 50 weight percent phosphatidylglycerol.

40. (cancelled)

41. (cancelled)

42. (currently amended) The method of claim 35 wherein [at least one of phosphatidylcholine, phosphatidylglycerol, and] the poly(ethylene glycol) is attached to a lipid such as phosphatidylethanolamine [, have] and has acyl chains containing from about [16] 8 to about 18 carbon atoms.

43. (currently amended) The method of claim 42 wherein the acyl chains contain from about [8] 16 to about 18 carbon atoms.

44. (currently amended) The method of claim 42 wherein the acyl groups comprise at least one of distearoyl, stearoyl oleoyl, oleoyl stearoyl, stearoyl palmitoyl, dipalmitoyl, dioleoyl, palmitoyl oleoyl and dipalmitoleoyl.

45. (original) The method of claim 35 wherein the carrier comprises at least one of poly (ethylene glycol) - conjugated lipids, phosphatidylinositol, dipalmitoylphosphatidylpolyglycerol, lipid conjugated polyoxyethylene, lipid conjugated polysorbate, or lipids conjugated other

hydrophilic steric coating molecules safe for in vivo use, the sterically stabilized liposome being effective to extend the effective lifetime of a drug in the respiratory tract of a mammal.

46. (currently amended) The method of claim 35 wherein the carrier [is] contains phosphatidylcholine, phosphatidylglycerol, and poly(ethylene glycol)-distearyolphosphatidyldiethanolamine, with or without cholesterol.

47. (withdrawn) The method of claim 35 wherein the drug is a drug useful for treatment of the respiratory tract of the mammal and is compatible with the sterically stabilized liposome.

48. (withdrawn) The method of claim 47 wherein the drug is selected from the group consisting of budesonide, flunisolide, triamcinolone, beclomethasone, fluticasone, mometasone, dexamethasone, hydrocortisone, methylprednisolone, prednisone, cotisone, betamethasone, terbutaline, albuterol, ipratropium, pirbuterol, epinephrine, salmeterol, levalbuterol, formoterol, montelukast, zafirlukast, zileuton, loratadine, cetirizine isoniazid, ethambutol, pyrazinamide, rifamycin; rifampin, streptomycin, clarithromycin, azelastine, theophylline, amikacin, gentamicin, tobramicin, rifabutin, rifapentine, sparfloxacin, ciprofloxacin, quinolones, azithromycin, erythromycin, and isoniazid.

49. (currently amended) The method of claim 35 wherein the carrier [comprises] contains egg-derived or soybean derived phosphatidylglycerol.

50. (currently amended) The method of claim 35 wherein the carrier [comprises] contains egg-derived or soybean-derived phosphatidylglycerol.

51. (cancelled)

52. (withdrawn) The method of claim 35 wherein the drug is triamcinolone.

53. (newly added) The carrier of claim 1 wherein the carrier contains distearoylphosphatidylethanolamine-cholesterol.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.